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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
HU, HENRY S	

ART UNIT	PAPER NUMBER
1713	

DATE MAILED: 07/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

A9

Office Action Summary	Application No.	Applicant(s)	
	10/619,190	COLAIANNA ET AL.	
	Examiner	Art Unit	
	Henry S. Hu	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *Pre-Amendment of 7-15-2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5* is/are rejected.

7)☒ Claim(s) *1 and 2* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *10-17-2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. It is noted that USPTO has received a Pre-Amendment on claims filed on July 15, 2003. It is also noted that USPTO has received an **oath/declaration** as well as an **IDS**, both filed on October 17, 2003. **Claims 1-5 are pending now**. An action follows.

Specification

2. The disclosure is objected to because of the following informalities:

(a) On page 7 at line 13, recitation "perfluoroalkoxybenzen" should be changed to "**perfluoroalkoxybenzene**". Please refer to Aldrich chemical catalog for a correct name.

(b) On page 15 at line 13, recitation "gaschromatography" should be changed to "**gas chromatography**". A space is needed.

Claim Objections

3. Claims 1 and 2 are objected to because of the following informalities:

On **Claim 1** at line 4 and **Claim 2** at lines 4 and 7, all three recitations of "**preferably XXX**" are improper because it is **unclear** whether the limitation(s) following the phrase are part of the claimed invention. The use of the phrase "**preferably XXX**" to link a broad range of

values with a narrow range of value renders the claim to be improper. It is not clear which range controls the actual metes and bounds of the claimed subject matter. **It is suggested to move the preferable range as a dependent claim.**

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 3 and 4 provide for the use of TFE/PMVE copolymers, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 3 and 4 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd.* v. *Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. *The limitation of parent* ***Claim 1*** *in present invention relates to* ***copolymers formed by TFE and FMVE****, having the following composition: (a)* ***FMVE in per cant by moles from 2.5% to 8%****, (b) the % TFE moles being the complement to 100% of the FMVE moles. See other limitations of dependent* ***Claims 2-5****.*

8. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Abulseme et al. (US 5,463,006).

Regarding the limitation of parent **Claim 1**, **Abulseme et al.** disclose the preparation of a **melt-processable** (same as **thermoprocessable) bipolymer of TFE and PMVE (same as FMVE,** please see page 4 at line 10) with a specific mole % in the range of **0.5% to 13% for PMVE** monomer (abstract, line 14; column 2, line 9-21; column 6, line 6-8; also see **Table 1** on column 7, line 10-12).

9. Regarding **Claim 2**, Abulseme et al. disclose that the copolymer has **a melt flow index of 7-20 g/10 min** measured by ASTM D-2176-63T (column 7, line 12; column 5, line 50). The copolymer also shows a **"second melting temperature" when it is heated up to 350 °C** (column 5, line 31).

Regarding **Claims 3-5**, Abulseme et al. have disclosed the application as such copolymers can be useful for **coating electrical cables by melt extrusion** (column 1, line 4-6). Since it carries the same properties as present application, certainly its application includes making the claimed cables for Local Area Networks.

10. Claim 1 is rejected under 35 U.S.C. 102(a)/(102(e) as being anticipated by Albano et al. (US 6,395,834 B1).

Regarding the limitation of parent **Claim 1**, **Albano et al.** disclose the preparation of a **melt-processable** (same as **thermoprocessable) bipolymer of TFE and PMVE (same as FMVE,** please see page 4 at line 10) with a specific mole % in the range of **20-50 % for PMVE** monomer (column 4, lines 11-12 and 24; column 3, line 24-26 and 50-54).

11. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Gibbard (US 5,180,803).

Regarding the limitation of parent **Claim 1**, **Gibbard** discloses the preparation of a **melt-processable bipolymer of TFE and PMVE (same as FMVE,** please see page 4 at line 10) **with a specific mole ratio of (30-100)/(0-70)** for the monomers (column 6, line 60 – column 7, line 45; see column 7, line 23-24 for PMVE used as co-monomer). Although PPVE has been specifically mentioned on column 7, line 23-45, Gibbard has stated "perfluoro(alkyl vinyl ether)

such as perfluoro(methyl vinyl ether" as well as "perfluoro(alkyl vinyl ether) of 3 to 10 carbons" (However, it is not specifically stated for number of carbon atoms in alkyl group). In a close view of the following statement on column 7 at line 34-35 as "**perfluoro α-olefins of 3 to 10 carbon atoms (particularly HFP)**", clearly only the number of **total** carbon atoms is counted. Therefore, **PMVE should be included in the class of perfluoro(alkyl vinyl ether) as it contains three carbons**.

12. Claim 2 is rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Gibbard (US 5,180,803) or Albano et al. (US 6,395,834 B1), each individually.

The above discussion of the disclosures of the prior art of Gibbard or Albano for Claim 1 of this office action is incorporated here by reference. Regarding the limitation of **Claim 2**, each reference is **silent of the property as melt flow index and the second melting temperature**. In light of the fact that the prior art and the present invention recite **(a) substantially identical dipolymer composition and (b) using the same type of polymerization process** (see pages 6-8 for present application, see column 8, line 28-32 for Gibbard; see column 2, line 34-67 for Albano), a reasonable basis exists to believe that the products of the invention inherently possess the same properties. Since PTO does not have proper means to conduct experiments, the burden of proof is now shifted to Applicants to show otherwise. *In re Best*, 195 USPQ 430 (CCPA 1977).

> It has been held that where applicant claims a composition in terms of function, property or characteristic where said function is not explicitly shown by the reference and where the examiner has explained why the function, property or characteristic is considered inherent in the prior art, it is appropriate for the examiner to make a rejection under both the applicable section of 35 USC 102 and 35 USC 103 such that the burden is placed upon the applicant to provide clear evidence that the respective compositions do in fact differ. *In re Best*, 195 USPQ 430, 433 (CCPA 1977); *In re Fitzgerald et al.*, 205 USPQ 594, 596 (CCPA 1980).

13. Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gibbard (US 5,180,803) or Albano et al. (US 6,395,834 B1), each individually in view of Abulseme et al. (US 5,463,006).

The above discussion of the disclosures of the prior art of Gibbard, Albano and Abulseme of this office action is incorporated here by reference. Regarding **Claims 2-5**, both Gibbard and Albano are silent about (A) the claimed properties (Claim 2) and (B) using the copolymer to prepare sheaths, cables and wires (Claims 3-5). Since Abulseme et al. have disclosed the application as such copolymers can be useful for **coating electrical cables by melt extrusion** (column 1, line 4-6).

With respect to **Claim 2**, in light of the fact that same copolymers having similar or the same composition in monomers are prepared from same or similar polymerization process, it carries the same or similar properties as present application in view of above discussion using the prior art of Abulseme for Claim 2 of this office action.

With respect to **Claims 3-5**, one ordinary skill in the art would expect such copolymers made by Gibbard or Albano have the same application to be used in making electrical cables including the cables for Local Area Networks as taught by Abulseme.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure. The following references relate to a copolymer of tetrafluoroethylene and perfluoromethyl vinyl ether:

US Patent No. **5,071,609 to Tu** et al. disclose a process of manufacturing porous multi-expanded fluoropolymers by blending polytetrafluoroethylene with a copolymeric elastomer from monomers of TFE and PMVE (abstract, line 1-2; title; column 4, line 3-27). This composite material can be utilized to produce vascular grafts with excellent biological compatibility (abstract, line 9-10). However, the **copolymeric elastomer of TFE and PMVE is only a thermosetting elastomer,** which is not a claimed thermoplastic polymer (column 4, line 18). Additionally, **no ratio of TFE/PMVE** is disclosed. Therefore, Tu fails to teach or fairly suggest the copolymers of present invention.

15. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Henry S. Hu whose telephone number is **(571) 272-1103**. The examiner can be reached on Monday through Friday from 9:00 AM –5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (571) 272-1114. The fax number for the organization where this application or proceeding is assigned is (703) 872-9306 for all regular communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Henry S. Hu

July 22, 2004

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